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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/580,329

05/24/2006

Qiu-Ping Qin

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32954 7590 06/18/2008

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EXAMINER

GRUN, JAMES LESLIE

ART UNIT

PAPER NUMBER

1641

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/580,329	<b>Applicant(s)</b> QIN ET AL.	
	<b>Examiner</b> JAMES L. GRUN	<b>Art Unit</b> 1641	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 17-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/24/06;7/3/07;4/15/08</u> .                                  | 6) <input type="checkbox"/> Other: ____.                          |

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Claims 17-32 remain in the case.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 17-32 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 17 and claims dependent thereupon are method claims and, as such, they should clearly set forth the various method steps in a positive, sequential manner using active tense verbs such as mixing, reacting, and detecting. These claims are indefinite because without any active, positive steps delimiting how the method is actually practiced it is unclear what method/process applicant is intending to encompass. The claims should also clearly state each component used in the method and the relationship of the various components. The claims should also conclude with a step relating the method result to the purpose of the method, preferably to the purpose as also set forth in the preamble of the claim. In these claims, “the” pregnancy associated plasma protein A or proform lack antecedent basis.

In claim 18 and claims dependent thereupon, “the” binders should be distinguished. In these claims, “the” amount lacks antecedent basis.

In claim 22 and claims dependent thereupon, recitations of “the” signal, subunit, or molecule lack antecedent basis.

In claim 24 and claims dependent thereupon, “the” bioaffinity reaction lacks antecedent basis.

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Claim 27 and claims dependent thereupon are method claims and, as such, they should clearly set forth the various method steps in a positive, sequential manner using active tense verbs such as mixing, reacting, and detecting. "Employing" or "using" are not valid method steps. These claims are indefinite because without any active, positive steps delimiting how the method is actually practiced it is unclear what method/process applicant is intending to encompass. The claims should also clearly state each component used in the method and the relationship of the various components. The claims should also conclude with a step relating the method result to the purpose of the method, preferably to the purpose as also set forth in the preamble of the claim.

In claim 29, recitations of "the" sample, amount, signal, subunit, or molecule lack antecedent basis. In this claim, "the" binders should be distinguished.

In claim 30, "the" bioaffinity reaction or sample lack antecedent basis.

In claim 31 and claims dependent thereupon, acronyms should be defined at their first appearance.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent,

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except that an international application filed under the treaty defined in section 351(a) shall have the effects for the purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language;

Claims 17, 23, 31, and 32 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Overgaard et al. (WO 00/54806).

Overgaard et al. teach the production of monoclonal antibodies specific for pregnancy-associated plasma protein-A (PAPP-A) not complexed with pro major basic protein (proMBP) and the use of the antibodies for detection of uncomplexed PAPP-A in a sample (see e.g. page 6).

Claims 17, 23, 31, and 32 are rejected under 35 U.S.C. § 102(e)(2) as being clearly anticipated by Overgaard et al. (US 7,115,382).

Overgaard et al. teach the production of monoclonal antibodies specific for pregnancy-associated plasma protein-A (PAPP-A) not complexed with pro major basic protein (proMBP) and the use of the antibodies for detection of uncomplexed PAPP-A in a sample (see e.g. col. 5 and Claim 1).

Claims 17, 23, 27, 28, 31, and 32 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Conover et al. (US 6,500,630).

Conover et al. teach determinations of pregnancy-associated plasma protein-A (PAPP-A) as a marker for inflammatory conditions, in particular acute coronary syndromes. The reference teaches the production of monoclonal antibodies specific for PAPP-A not complexed with pro major basic protein (proMBP) and the use of the antibodies for detection of uncomplexed PAPP-A in a sample (see e.g. cols. 4 and 6). Moreover the reference teaches an assay for PAPP-A

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activity, inherently measuring the free active form, wherein the enzyme is captured with an antibody and reacted with substrate (see e.g. col. 7).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Overgaard et al. (JBC 275: 31128, 2000) teach proMBP as an inhibitor of PAPP-A enzymatic activity.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James L. Grun, Ph.D., whose telephone number is (571) 272-0821. The examiner can normally be reached on weekdays from 9 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le, SPE, can be contacted at (571) 272-0823.

The phone number for official facsimile transmitted communications to TC 1600, Group 1640, is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application, or requests to supply missing elements from Office communications, should be directed to the Group receptionist whose telephone number is (571) 272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/J. L. G./

Examiner, Art Unit 1641

June 18, 2008

/Long V Le/

Supervisory Patent Examiner, Art Unit 1641